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By: Kim M. Hoplen

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PATENT  
Attorney Docket No.

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re the application of:

Andrzej Z. Sledziewski et al..

Application No.: 08/980,400

Filed: November 26, 1997

For: BIOLOGICALLY ACTIVE  
DIMERIZED AND  
MULTIMERIZED POLYPEPTIDE  
FUSIONS (As Amended)

Examiner: C. Kaufman

Art Unit: 1646

**FORMAL DRAWINGS TRANSMITTAL**



Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

Pursuant to the Notice of Allowability dated June 24, 1999, Applicants submit 21 sheets of formal drawings to be made of record in the above-identified case.

Respectfully submitted,

Dated: 9/24/99

By: [Signature]

Jeffrey J. King  
Reg. No. 38,515

TOWNSEND and TOWNSEND and CREW LLP  
Two Embarcadero Center, 8<sup>th</sup> Floor  
San Francisco, CA 94111  
(206) 467-9600  
SE 5001074 v1

1 GGCCCTCAGCCCTGTGCGCCAGCAGAGCTGTGTCGCCCTGCCCAAGCAGACAGCCAGACCCAGG 69  
 70 GCGGCCCTGTGCGGCTGTCTCTCCGAAGATGCTTGGGAGTGAGCGAAGCTGGCGCTCTCTC 138  
 139 TCCCTACAGCAGACCCCTTCTCCATCCCTCTGTCTCTGAGCCTTCAGGAGCCTGCACAGTCTTG 207  
 208 CCTGTCTTCTACTCAGCTGTACCCACTCTGGGACCAGCAGTCTTTCTGATACTGGGAGAGGCGAGT 276  
 277 AAGGAGACTTCTGGAGGGGTCACTGTCCAGAGCCTGGAAGTGTCCACACCCAGAAAGCCATCAGCA 345  
 346 GCAAGGACACCATCGGCTTCCGGGTGCGATGCCAGCTTGGCCCTCAAAGCGAGCTGCTGTGCTGT 414  
     M R L P G A M P A L A L K G E L L L S 20  
 415 CTCTCTGTGTTACTTCTGGAACCAAGATCTCTCAGGCGTGGTGTGTCACACCCCGGGCCAGAGCTTG 483  
     L L L L L E P Q I S Q G L V V T P P G P E L V 43  
 484 TCCTCAATGTCTCCAGCACCTTCTGTGACCTGCTCGGGTTCAGCTCCGGTGTGTGGAAACGATGT 552  
     L N V S S T F V L T C S G S A P V V W E R M S 66  
 553 CCCAGGAGCCCCACAGGAATGGCCAAAGGCCAGGATGGACCTTCTCCAGCGTGTCTCACACTGACCA 621  
     Q E P Q E M A K A Q D G T F S S V L T L T N 89  
 622 ACCTACTGGGCTAGACACGGGAGAACTTTTGCACCCACAATGACTCCCGTGGACTGGAGACCGATG 690  
     L T G L D T G E Y F C T H N D S R G L E T D E 112  
 691 AGCGAAACGGCTCTACATCTTGTGCCAGATCCCACCGTGGGCTTCTCCCTAATGATGCCGAGGAC 759  
     R K R L Y I F V P D P T V G F L P N D A E E L 135  
 760 TATTCACTTTCTCACGGAATAACTGAGATCACCATTCACATGCCGAGTAACAGACCCACAGCTGTGG 828  
     F I F L T E I T E I T I P C R V T D P Q L V V 158

Fig. 1A



U.S. Patent Appl. No. 08/980,400  
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Fig. 1A, Sheet 1 of 21

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829 TGACACTGCACGAGAGAAAGGGGACGTTGCACTGCCTGTCCCTATGATCACCAAGTGGCTTTTCTG 897  
 T L H E K K G D V A L P V P Y D H Q R G F S G 181  
 898 GTATCTTTGAGGACAGAAAGTACATCTGCAAAACCACTGGGACAGGAGGTGGATTCTGATGCCT 966  
 I F E D R S Y I C K T T I G D R E V D S D A Y 204  
 967 ACTATGTCTTACGACTCCAGGTGTTCATCCATCAACGTCCTGTGAAGCGAGTGCAGACTGTGTCCGCC 1035  
 Y V Y R L Q V S S I N V S V N A V Q T V V R Q 227  
 1036 AGGTGAGAACATCACCCCTCATGTGCATTGTGATCGGGAATGAGTGGTCAACTTCGAGTGGACATACC 1104  
 G E N I T L M C I V I G N E V V N F E W T Y P 250  
 1105 CCGCGAAGAAAGTGGCGGCTGGTGAGCCGGTGACTGCTTCTTGGATATGCCTTACCAATCC 1173  
 R K E S G R L V E P V T D F L L D H P Y M I R 273  
 1174 GCTCCATCTGCACATCCCCAGTCCCGAGTTAGAAGACTCGGGGACCTACACCTGCAATGTGACGGAGA 1242  
 S I L H I P S A E L E D S G T Y T C N V T E S 296  
 1243 GTGTGAATGACCATCAGGATGAAGAAGCCATCAACATCACCGTGGTTGAGAGCGGCTACGTGGCGTCC 1311  
 V N D H Q D E K A I N I T V V E S G Y V R L L 319  
 1312 TGGGAGAGGTGGGCACACTACAATTTGCTGAGCTGCATCGGAGCGGACACTGCAGGTAGTGTTCGAGG 1380  
 G E V G T L Q F A E L H R S R T L Q V V F E A 342  
 1381 CCTACCCACGCCCACTGTCTGTGGTTCAAAGACACCGACCCCTGGGCGACTCCAGCGCTGGCGAAA 1449  
 Y P P P T V L W F K D N R T L G D S S A G E I 365  
 1450 TCGCCTGTCCAGCGCAAGGTGTGCGAGACCCGGTATGTTCAGAGGTGACACTGGTTCGCGTGAAGG 1518  
 A L S T R N V S E T R Y V S E L T L V R V K V 388

Fig. 1B



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Fig. 1B, Sheet 2 of 21

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2209 CCGCTCATGGCCCTGAGCCATTCTCAGGCCACGATGAAGTGGCCGTCAAGATGCTTAAATCCACAGCCC 2277  
 A H G L S H S Q A T M K V A V K M L K S T A R 641  
 2278 GCAGCACTGAGAAGCAAGCCCTTATGTCGGAGCTGAAGATCATGAGTCACCTTGGGCCCCACCTGAACG 2346  
 S S E K Q A L M S E L K I M S H L G P H L N V 664  
 2347 TGGTCAACCTGTGGGGCCCTGCACCAAGGAGGACCCATCTATATCATCACTAGTACTGCCGCTACG 2415  
 V N L L G A C T K G G P I Y I I T E Y C R Y G 687  
 2416 GAGACCTGTGGACTACTCTGCACCGCAACAACACACCTTCTCTCAGCACCACACTCCGACAAAGCGCCGCC 2484  
 D L V D Y L H R N K H T F L Q H H S D K R R P 710  
 2485 CGCCCAAGCGGAGCTCTACAGCAATGCTCTGCCCGTTGGGCTCCCGCTGCCAGCCATGTGTCTTGA 2553  
 P S A E L Y S N A L P V G L P L P S H V S L T 733  
 2554 CCGGGGAGACGCGGTGCTACATGACATGAGCAAGGACGAGTCGGTGGACTATGTGCCCATGTGG 2622  
 G E S D G G Y M D M S K D E S V D Y V P M L D 756  
 2623 ACATGAAGGAGAGCTCAAAATATGCAGACATCGAGTCCTCCAACTACATGCGCCCTTACGATAACTAGC 2691  
 M K G D V K Y A D I E S S N Y M A P Y D N Y V 779  
 2692 TTCCTCTGCCCTTGAGAGACCTGCGGACCACTTGTATCAACGAGTCTCCAGTGCTAAGCTACATGG 2760  
 P S A P E R T C R A T L I N E S P V L S Y M D 802  
 2761 ACCTCGTGGCTTCAGTACCAGTGGCCCAATGGCATGGAGTTTCTGGCCTCCAAGAACTCGTCCACA 2829  
 L V G F S Y Q V A N G M E F L A S K N C V H R 825  
 2830 GAGACCTGGCGGTAGAAAGTCTCATCTGTGAGGCAAGCTGGTCAAGATCTGTGACTTTGGCCTGG 2898  
 D L A A R N V L I C E G K L V K I C D F G L A 848

Fig. 1D



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1519 TGCAGAGGTGCCACTACACCATGCGGGCCTTCATGAGGATGCTGAGTCCAGTCTCTCTCCAGC 1587  
A E A G H Y T M R A F H E D A E V Q L S F Q L 411  
1588 TACAGATCAATGTCCCTGTCCGAGTGTGGAGCTAAGTGAGAGCCACCCTGACAGTGGGAACAGACAG 1656  
Q I N V P V R V L E L S E S H P D S G E Q T V 434  
1657 TCCGCTCTGCTGGCCGGGGCATGCCCCAGCGGAACATCATCTGCTCTGCCCTGCAGAGACCTCAAAGT 1725  
R C R G R G M P Q P N I I W S A C R D L K R C 457  
1726 GTCCACGTGAGCTGCCGCCACCGTGTGGGGAACAGTCCGAAGAGAGAGCCAGCTGGAGACTAACG 1794  
P R E L P P T L L G N S S E E S Q L E T N V 480  
1795 TGACGTACTGGAGGAGCAGGAGTTTGAGGTGGTGAGCACACTGCGTCTGCAGCACGTGGATCGGC 1863  
T Y W E E E Q E F E V V S T L R L Q H V D R P 503  
1864 CACTGTGCGTGCCTGCACCGTGGCAACCGTGTGGCCAGGACACGAGAGGTCTATCGTGTGCCAC 1932  
L S V R C T L R N A V G Q D T Q E V I V P H 526  
1933 ACTCCTTGCCCTTTAAGGTGGTGGTGATCTCAGCCATCCTGGCCCTGGTGGTCTCACCATCATCTCC 2001  
S L P F K V V V I S A I L A L V V L T I I S L 549  
2002 TTATCATCTCATCGCTTTGGCAGAAGACCCAGTTCAGAGATCCGATGGAGGTGATTGAGTCTG 2070  
I I L I M L W Q K K P R Y E I R W K V I E S V 572  
2071 TGAGCTCTGAGGCCATGAGTACATCTACGTGGACCCCATCGACCTGCCCTATGACTCCAGCTGGGAGC 2139  
S S D G H E Y I Y V D P M Q L P Y D S T W E L 595  
2140 TGGCGGGGACCAGCTGTGCTGGGAGCACCCTCGGCTCTGGGCCCTTTGGGAGGTGGTGGAGGCCA 2208  
P R D Q L V L G R T L G S G A F G Q V V E A T 618

Fig. 1C



2899 CTCGAGACATCATCGGGACTCGAATTACATCTCCAAAGGAGACACCTTTTGCTTTAAAGTGGATGG 2967  
 R D I M R D S N Y I S K G S T F L P L K W M A 871  
 2968 CTCGGGAGAGCATCTTCAACAGCCTCTACACCACCCTGAGGACGTGTGGTCTTCGGGATCCTGCTCT 3036  
 P E S I F N S L Y T T L S D V W S F G I L L W 894  
 3037 GGGAGATCTTTCACCTTGGGTGGCACCCCTTACCAGAGCTGCCATGAACGAGCAGTTCTACAATGCCA 3105  
 E I F T L G G T P Y P E L P M N E Q F Y N A I 917  
 3106 TCAAACGGGGTTACCGCATGGCCAGCCTGCCCATGCCTCGAGAGATCTATGAGATCATGCAGAACT 3174  
 K R G Y R M A Q P A H A S D E I Y E I H Q K C 940  
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 E G Y K K K Y Q Q V D E E F L R S D H P A I L 986  
 3313 TTCGGTCCCAAGGCCGCTTGCTGGTTCCATGGCCTCCGATCTCCCTGGACACCAAGCTCCGTCCTCT 3381  
 R S Q A R L P G F H G L R S P L D T S S V L Y 1009  
 3382 ATACTGCGTGCAGCCCAATGAGGGTGACAACGACTATATCATCCCCCTGCTGACCCCAACCCGAGG 3450  
 T A V Q P N E G D N D Y I I P L P D P K P E V 1032  
 3451 TTGCTGACGAGGGCCCACTGGAGGGTTCCCCCAAGCCTAGCCAGCTCCACCCTGAATGAAGTCAACACT 3519  
 A D E G P L E G S P S L A S S T L N E V N T S 1055  
 3520 CCTCAACCATCTCTGTGACAGCCCTTGAGCCCGCCAGGCGAACCCAGAGCCAGAGCCCGCAGTTGAGC 3588  
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Fig. 1E



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Fig. 1E, Sheet 5 of 21

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3589 TCAGGTGAGCGGAGCAGAGCTGAACAGTTGCGGATTCGGGTGCCCTCGCCTCGGCGGAAG 3657  
 Q V E P E P E L E Q L P D S G C P A P R A E A 1101  
 3658 CAGAGGATAGCTTCCTGTAGGGGCTGGCCCTACCTGCCCTGCCTGAAGCTCCCCCCTGCCAGCAC 3726  
 E D S F L 1106  
 3727 CCAGCATCTCTGSCCTGGCTGACCGGGCTTCCTGTACGACAGCTGCCCTTATAGCTGCCCTTC 3795  
 3796 TGGAAGCTTTTCTGCTCTGACTGTTGTGCCCCAAACCTGGGCTGGCTTAGGAGGCAAGAAAACAGC 3864  
 3865 AGGGCCGTGACCAGCCCTCTGCCCTCAGGAGGCCAACTGACTCTGAGCCAGGGTTCCCCCAGGGAAC 3933  
 3934 TCAGTTTTCCCATATGTAAGATGGGAAAGTTAGGCTTGATGACCCAGAACTAGGATTCCTCCCTGGC 4002  
 4003 TGACACGGTGGGAGACCGAATCCCTCCCTGGGAAGATCTTGGAGTTACTGAGGTGGTAAATTAACAT 4071  
 4072 TTTTCTGTTCAGCCAGCTACCCCTCAAGGAATCATAGCTCTCTCTCGCACTTTTATCCACCCAGGA 4140  
 4141 GCTAGGGAAGAGACCCCTAGCCTCCCTGGCTGGCTGAGCTAGGGCCTAGCTTGAGCAGTGTGGCTC 4209  
 4210 ATCCAGAAGAAAGCCAGCTCTCCCTCCCTATGATGCCAGTCCCTGGCTTCCCTGGCCCGAGTGGTCTGGG 4278  
 4279 GCCATTAGGAGCCCTAATTAATGCTGGAGGCTGAGCCAAAGTACAGGACACCCCCAGCCTGCAGGCCCTTG 4347  
 4348 CCCAGGGCATTGGAGCACAGGACGCATAGCAAGTGCCTGTGTCCCTGTCTTCAGGCCCATCAGTCC 4416  
 4417 TGGGGCTTTTCTTTATCACCCCTCAGTCTTAATCCATCCACCAGAGTCTAGAGGCCAGACGGGGCCCCG 4485  
 4486 CATCTGTATGAGNAATGTAATGTGCCAGTGTGGAGTGGCCACGTGTGTGCCAGTATATGGCCCTGG 4554

Fig. 1F



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Fig. 1F, Sheet 6 of 21

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4555 CTCTGCATTGGACCTGCTATGAGGCTTTGGAGGAATCCCTCACCTCTCTGGGCTCAGTTTCCCTTC 4623  
 4624 AAAAAATCAATAAGTCGGACTTATTAACCTCTGAGTGCCTTCCAGCACTAACATTTAGAGTATTCAG 4692  
 4693 GTGCTGCACATTTCTCCAGATGAAGCAAGCCTATACCTAAACTTCATCCTGGGGTTCAGCTGGGCTC 4761  
 4762 CTGGGAGATTCAGATCACACATCACACTCTGGGACTCAGGAACCATGCCCTTCCACAGGCCCCAG 4830  
 4831 CAACTCTCAAGAACACAGCTGCACAGGCTTGACTTAGAGTGACAGCGGTGTCTCTGGAAGCCCCAAG 4899  
 4900 CAGCTGCCCCAGGACATGGGAAGACCACGGGACCTCTTTCACTACCCACGATGACCTCCGGGGGTATC 4968  
 4969 CTGGGCAAAAGGGACAAAGAGGGGCAATGAGATCACCTCTTGCAGCCCCACCACTCCAGCACCTGTGCG 5037  
 5038 AGGTCTGCGTCGAAGACAGAATGGACAGTGAGGACAGTTATGTCTTGTAAAGACAAAGAGCTTCAGAT 5106  
 5107 GGTACCCCAAGAGGATGTGAGAGGTGGCTGCTTTGGAGTTTGGCCCTCACCCACAGCTGCCCAT 5175  
 5176 CCCTGAGGCATGCCCTCCATGGGGGTATGGTTTGTCACTCCCAAGACCTTAGCAGTGACATCTCATTTGT 5244  
 5245 CCCCAGCCAGTGGGCATTTGGAGTGGCCAGGGGAGTCAGGGTTGTAGCCAAAGACGCCCCCGCACGGGA 5313  
 5314 GGGTTGGAAAGGGGTCGGAAGACTCAACCCCTCTGGGCACCAACCTTGCAATTCAGGTTGGCACCTT 5382  
 5383 ACTTCCCTGGATCCCCAGAGTTGGTCCAGGAGGAGATGGGTTCTCAATACGGTACCAAGATATA 5451  
 5452 ATCACCTAGGTTACAATATTTTAGGACTCACGTTAACTCACTATATACAGCAGAAATGCTATTTT 5520  
 5521 GTATGCTGTTAAGTTTTCATCTGTGACTTTTTTTTAAGGGAAGATTTT 5572

Fig. 1G



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Fig. 1G, Sheet 7 of 21

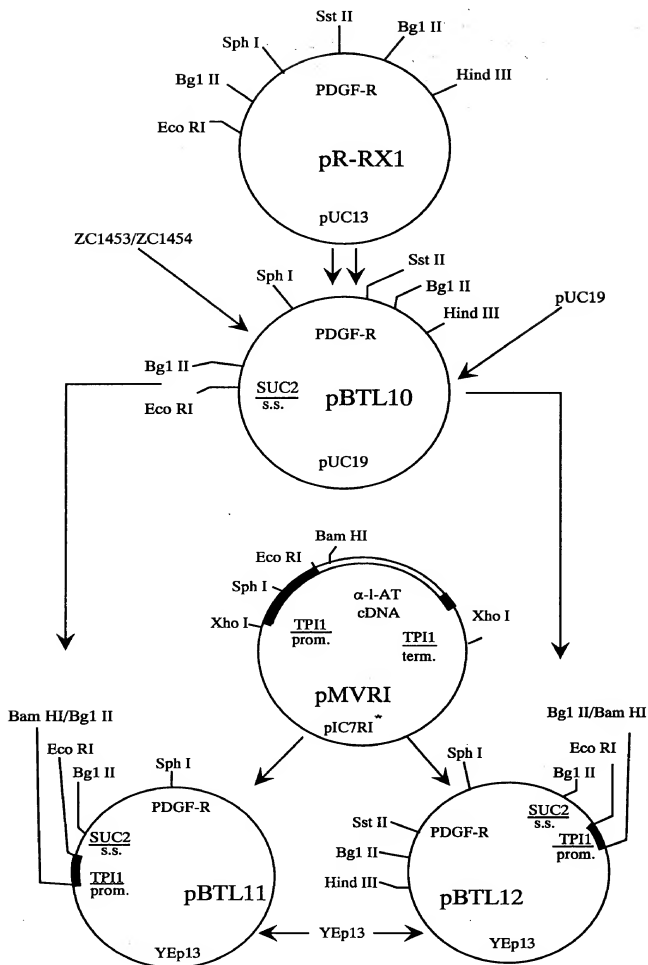
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**Figure 2**





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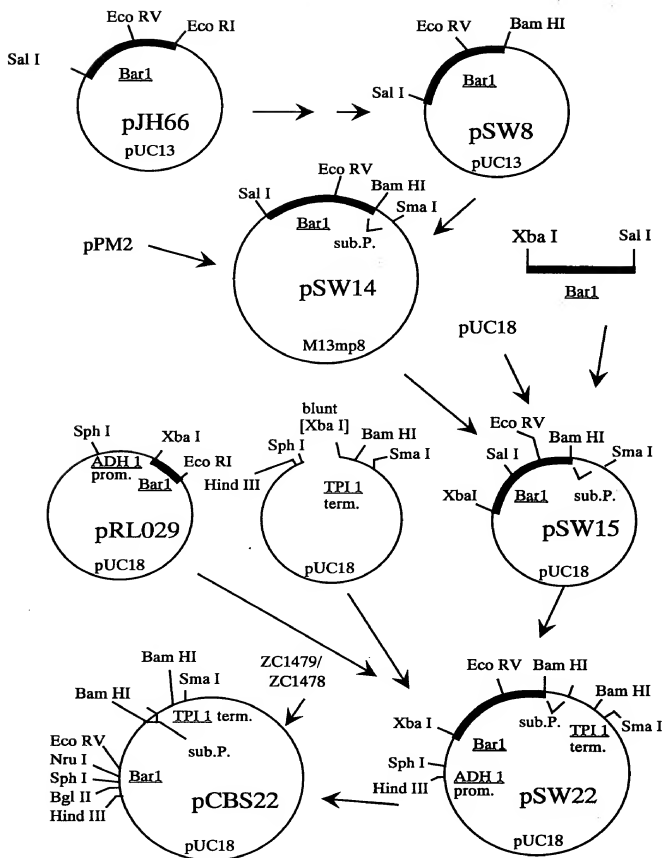
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**Figure 3**





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Fig. 3, Sheet 9 of 21

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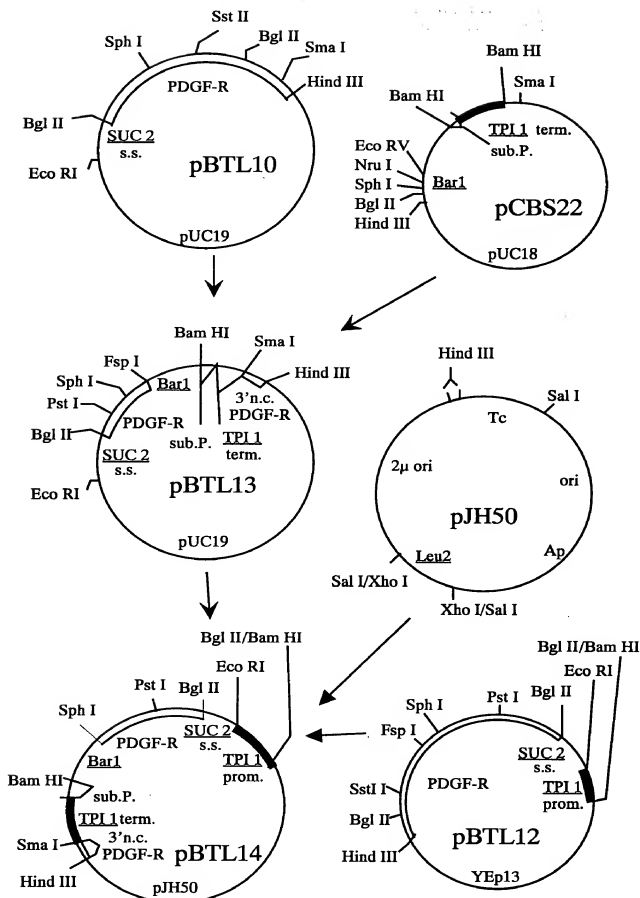
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**Figure 4**





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Fig. 4, Sheet 10 of 21

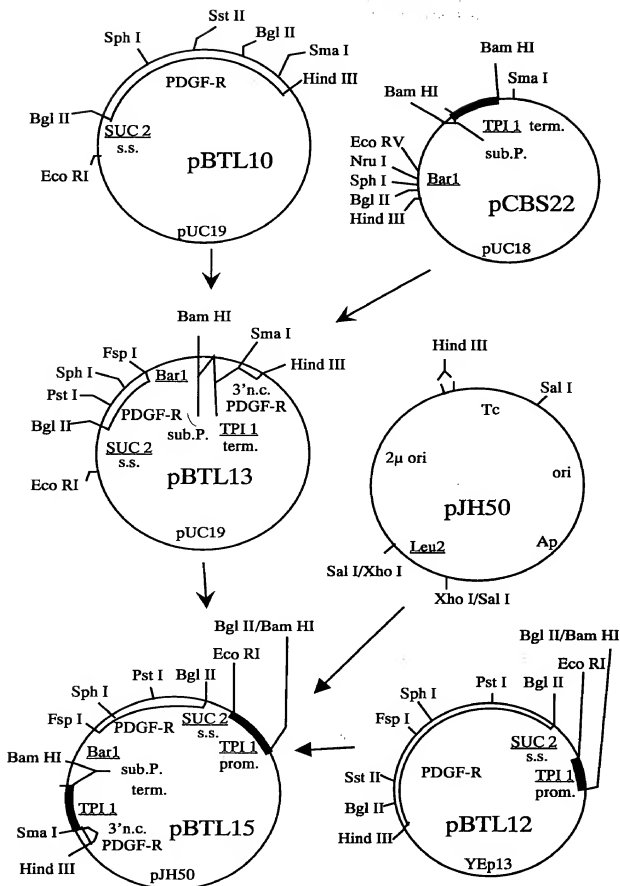
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Figure 5





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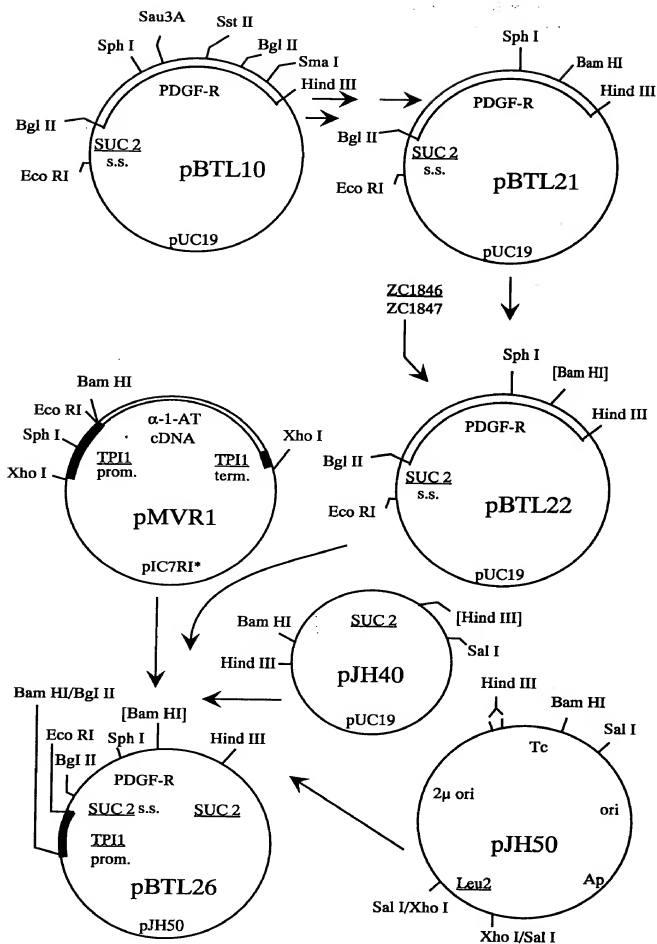
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**Figure 6**





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Fig. 6, Sheet 12 of 21

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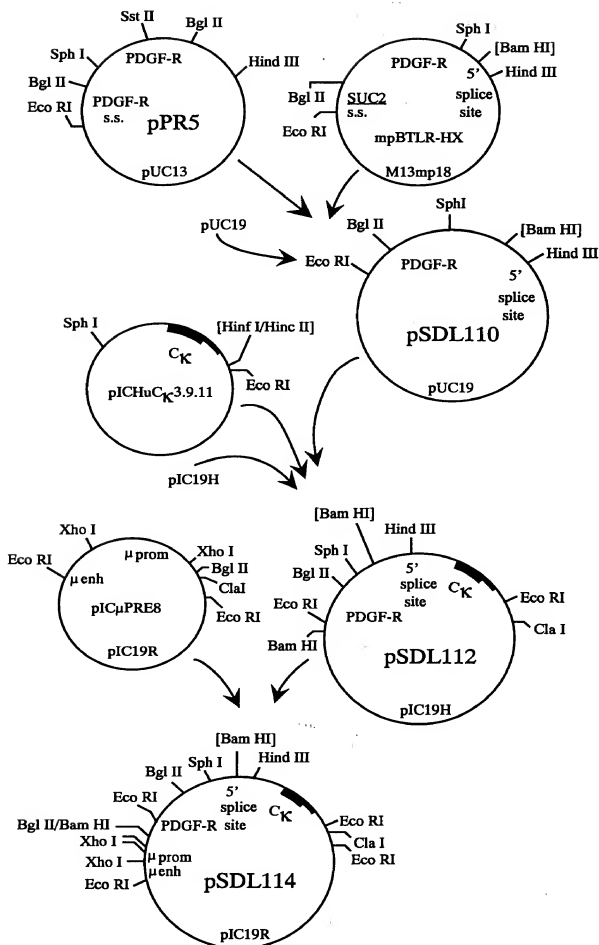
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**Figure 7**





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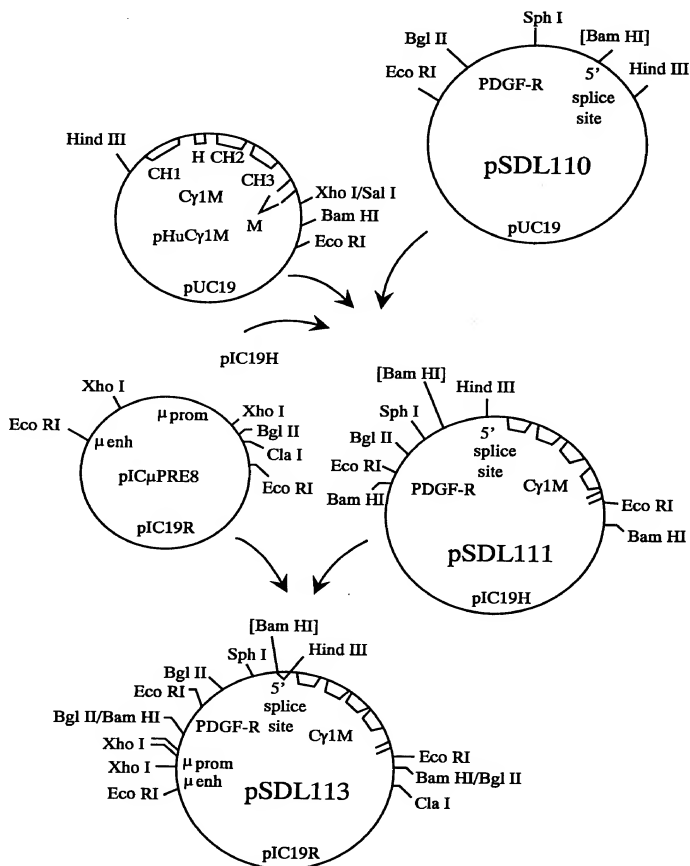
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**Figure 8**



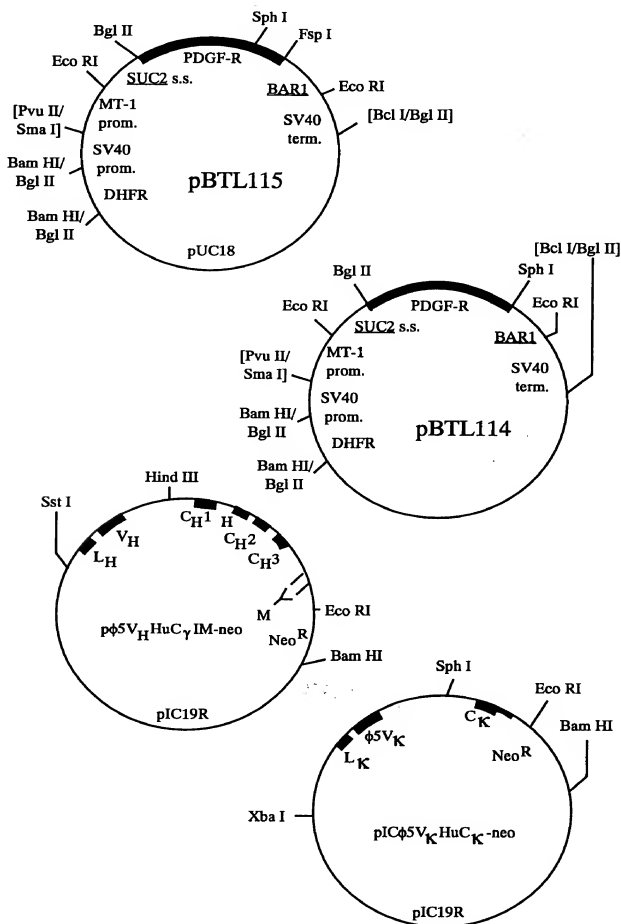


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**Figure 9**



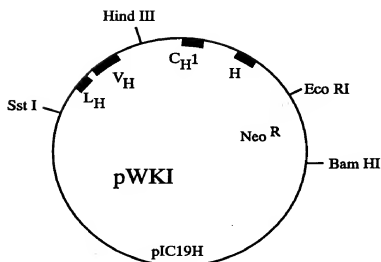
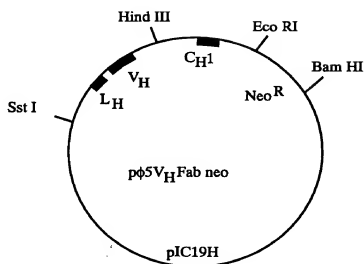
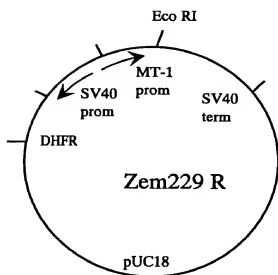


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**Figure 10**





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**Figure 11A**

1 GCCCTGGGGACGGACCGTGGGCGGCGCGCAGCGGGACGCGTTTTGGGGACGTGGTGCCAGCGCCT  
70 TCCTGCAGACCCACAGGAAGTACTCCCTTTGACCTCCGGGGAGCTGCGACCAGGTTATACGTTGCTGG  
139 TGGAAAAGTGACAATTCTAGGAAAAGAGCTAAAAGCCGGATCGGTGACCGAAAGTTTCCAGAGCTATG  
M  
1  
208 GGGACTTCCCATCCGGCGTTCTGGTCTTAGGCTGTCTTCTCACAGGGCTGAGCCTAATCCTTGCCAG  
G T S H P A F L V L G C L L T G L S L I L C Q  
277 CTTTCATTACCCTCTATCCTTCCAATGAAAATGAAAAGTTGTGACAGTGAATTCATCCTTTTCTCTG  
L S L P S I L P N E N E K V V Q L N S S F S L  
346 AGATGCTTTGGGGAGAGTGAAGTGAGCTGGCAGTACCCATGTCTGAAGAAGAGAGCTCCGATGTGGAA  
R C F G E S E V S W Q Y P M S E E E S S D V E  
415 ATCAGAAATGAAGAAAACACAGCGGCCTTTTGTGACGGTCTTGAAGTGAGCAGTGCCTCGGCGGCC  
I R N E E N N S G L F V T V L E V S S A S A A  
484 CACACAGGGTTGTACACTTGCTATTACAACCACACTCAGACAGAAGAATGAGCTTGAAGGCAGGCAC  
H T G L Y T C Y Y N H T Q T E E N E L E G R H  
553 ATTTACATCTATGTGCCAGACCCAGATGTAGCCTTTGTACCTCTAGGAATGACGGATTATTTAGTCATC  
I Y I Y V P D P D V A F V P L G M T D Y L V I  
622 GTGGAGGATGATGATTCTGCCATTATACCTTTGTGCGACAACCTGATCCCGAGACTCCTGTAACCTTACAC  
V E D D D S A I I P C R T T D P E T P V T L H  
691 AACAGTGAGGGGGTGGTACCTGCCTCTACGACGACAGAGGGCTTTAATGGGACCTTCACTGTAGGG  
N S E G V V P A S Y D S R Q G F N G T F T V G  
760 CCCTATATCTGTGAGGCCACCGTCAAAGGAAGAAGTTCAGACCATCCCATTTAATGTTTATGCTTTA  
P Y I C E A T V K G K K F Q T I P F N V Y A L  
829 AAAGCAACATCAGAGCTGGATCTAGAAATGGAAGCTCTTAAACCGTGTATAAGTCAGGGGAAACGATT  
K A T S E L D L E M E A L K T V Y K S G E T I  
898 GTGGTCACCTGTGCTGTTTTTAAATGAGGTGGTTGACCTTCAATGGACTTACCTGGAGAAGTGAA  
V V T C A V F N N E V V D L Q W T Y P G E V K

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**Figure 11B**

967 GGCAAAGGCATCACAATACTGGAAGAAATCAAAGTCCCATCCATCAAATTGGTGTACACTTTGACGGTC  
G K G I T I L E E I K V P S I K L V Y T L T V

1036 CCCGAGGCCACGGTGAAGACAGTGGAGATTACGAATGTGCTGCCCGCCAGGCTACCAGGGAGGTCAAA  
P E A T V K D S G D Y E C A A R Q A T R E V K

1105 GAAATGAAGAAAGTCACTATTTCTGTCCATGAGAAAGTTTCATTGAAATCAAACCCACCTTCAGCCAG  
E M K K V T I S V H E K G F I E I K P T F S Q

1174 TTGGAAGCTGTCAACCTGCATGAAGTCAACATTTTGTGTAGAGGTGCGGGCCTACCCACCTCCCAGG  
L E A V N L H E V K H F V V E V R A Y P P P R

1243 ATATCCTGGCTGAAAAACAATCTGACTCTGATTGAAAAATCTCACTGAGATCACCCTGATGTGAAAAAG  
I S W L K N N L T L I E N L T E I T T D V E K

1312 ATTCAGGAAATAAGGTATCGAAGCAAATTAAGCTGATCCGTGCTAAGGAAGAAGACAGTGGCCATTAT  
I Q E I R Y R S K L K L I R A K E E D S G H Y

1381 ACTATTGTAGCTCAAAATGAAGATGCTGTGAAGAGCTATACTTTTGAAGTGTTAACTCAAGTTCCTTCA  
T I V A Q N E D A V K S Y T F E L L T Q V P S

1450 TCCATTCTGGACTTGGTCGATGATCACCATGGCTCAACTGGGGGACAGACGGTGAGGTGCACAGCTGAA  
S I L D L V D D H H G S T G G Q T V R C T A E

1519 GGCACGCCGCTTCTGATATTGAGTGGATGATATGCAAAGATATTAAGAAATGTAATAATGAAACTTCC  
G T P L P D I E W M I C K D I K K C N N E T S

1588 TGGACTATTTTGCCAAACATGTCTCAAACATCATCAGGAGATCCACTCCCGAGACAGGAGTACCGTG  
W T I L A N N V S N I I T E I H S R D R S T V

1657 GAGGGCCGTGTGACTTTCGCCAAAGTGGAGGAGACCATCGCCGTGCGATGCCTGGCTAAGAATCTCCTT  
E G R V T F A K V E E T I A V R C L A K N L L

1726 GGAGCTGAGAACCGAGAGCTGAAGCTGGTGGCTCCACCTGCGTTCTGAACTCACGGTGGCTGCTGCA  
G A E N R E L K L V A P T L R S E L T V A A A

1795 GTCCTGGTGTCTGTTGGTGATTGTGATCATCTCACTTATTGTCTGGTGTGCTATTGGAAACAGAAACCG  
V L V L L V I V I I S L I V L V V I W K Q K P

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**Figure 11C**

1864 AGGTATGAAATTCGCTGGAGGGTCATTGAATCAATCAGCCGGATGGACATGAATATATTTATGTGGAC  
R Y E I R W R V I E S I S P D G H E Y I Y V D

1933 CCGATGCAGCTGCCTTATGACTCAAGATGGGAGTTTCCAAGAGATGGACTAGTGCTTGGTCGGGCTCTTG  
P M Q L P Y D S R W E F P R D G L V L G R V L

2002 GGGTCTGGAGCGTTTGGGAAGGTGGTTGAAGGAACAGCCTATGGATTAAGCCGGTCCCAACCTGTCATG  
G S G A F G K V V E G T A Y G L S R S Q P V M

2071 AAAGTTGCAGTGAAGATGCTAAAACCCAGGCCAGATCCAGTGAAAAACAAGCTCTCATGTCTGAACTG  
K V A V K M L K P T A R S S E K Q A L M S E L

2140 AAGATAATGACTCACCTGGGGCCACATTTGAACATTGTAACTTGCTGGGAGCTGCACCAAGTCAGGC  
K I M T H L G P H L N I V N L L G A C T K S G

2209 CCCATTTACATCATCACAGATATTGCTTCTATGGAGATTTGGTCAACTATTTGCATAAGAATAGGGAT  
P I Y I I T E Y C F Y G D L V N Y L H K N R D

2278 AGCTTCTGAGCCACCACCCAGAGAAGCCAAAGAAAGAGCTGGATATCTTTGGATTGAACCTGCTGAT  
S F L S H H P E K P K K E L D I F G L N P A D

2347 GAAAGCACACGGAGCTATGTTATTTTATCTTTTGAAAACAATGGTGACTACATGGACATGAAGCAGGCT  
E S T R S Y V I L S F E N N G D Y M D M K Q A

2416 GATACTACACAGTATGTCCCATGCTAGAAAGGAAAGAGGTTTCTAAATATTCGACATCCAGAGATCA  
D T T Q Y V P M L E R K E V S K Y S D I Q R S

2485 CTCTATGATCGTCCAGCCTCATATAAGAAGAAATCTATGTTAGACTCAGAAGTCAAAAACCTCCTTTCA  
L Y D R P A S Y K K K S M L D S E V K N L L S

2554 GATGATAACTCAGAAGGCCTTACTTTATTGGATTTGTTGAGCTTCACCTATCAAGTTGCCCGAGGAATG  
D D N S E G L T L L D L L S F T Y Q V A R G M

2623 GAGTTTTTGGCTTCAAAAAATGTGTCCACCGTGATCTGGCTGCTCGCAACGTCCTCTGGCACAAGGA  
E F L A S K N C V H R D L A A R N V L L A Q G

2692 AAAATTGTGAAGATCTGTGACTTTGGCCTGGCCAGAGACATCATGATGATTCGAACATGTGTGCGAAA  
K I V K I C D F G L A R D I M H D S N Y V S K

2761 GGCAGTACCTTTCTGCCCGTGAAGTGGATGGCTCCTGAGAGCATCTTTGACAACCTCTACACCACTG  
G S T F L P V K W M A P E S I F D N L Y T T L

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## Figure 11D

2830 AGTGATGTCTGGTCTTATGGCATTCTGCTCTGGGAGATCTTTTCCCTTGGTGGCACCCCTTACCCCGGC  
S D V W S Y G I L L W E I F S L G G T P Y P G

2899 ATGATGGTGGATTCTACTTTCTACAATAAGATCAAGAGTGGGTACCGGATGGCCAAGCCTGACCACGCT  
M M V D S T F Y N K I K S G Y R M A K P D H A

2968 ACCAGTGAAGTCTACGAGATCATGGTGAATGCTGGAACAGTGAGCCGGAGAAGAGACCCTCCTTTTAC  
T S E V Y E I M V K C W N S E P E K R P S F Y

3037 CACCTGAGTGAGATTGTGGAGAATCTGCTGCCTGGACAATATAAAAGAGTTATGAAAAATTCACCTG  
H L S E I V E N L L P G Q Y K K S Y E K I H L

3106 GACTTCCTGAAGAGTGACCATCTGCTGTGGCAGCATGCGTGTGGACTCAGACAATGCATACATTGGT  
D F L K S D H P A V A R M R V D S D N A Y I G

3175 GTCACCTACAAAAACGAGGAAGACAAGCTGAAGGACTGGGAGGGTGGTCTGGATGAGCAGAGACTGAGC  
V T Y K N E E D K L K D W E G G L D E Q R L S

3244 GCTGACAGTGGCTACATCATCTCTGCTGACATTGACCTGTCCTGAGGAGGAGGACCTGGGCAAG  
A D S G Y I I P L P D I D P V P E E E D L G K

3313 AGGAACAGACACAGCTCGCAGACCTCTGAAGAGAGTGCCATTGAGACGGGTCCAGCAGTTCCACCTTC  
R N R H S S Q T S E E S A I E T G S S S S T F

3382 ATCAAGAGAGAGGACGAGACCATTTGAAGACATCGACATGATGGACGACATCGGCATAGACTCTTCAGAC  
I K R E D E T I E D I D M M D D I G I D S S D

3451 CTGGTGAAGACAGCTTCTGTAACTGGCGGATTCGAGGGGTTCTTCCACTTCTGGGGCCACCTCTGG  
L V E D S F L

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3520 ATCCCGTTTCAGAAAACCACTTTATTGCAATGCGGAGGTTGAGAGGAGGACTTGGTTGATGTTTAAAGAG  
3589 AAGTTCCAGCCAAGGGCCTCGGGGAGCGTTCTAAATATGAATGAATGGGATATTTTGAAATGAACCTTT  
3658 GTCAGTGTTCCTCTTGCAATGCCTCAGTAGCATCTCAGTGGTGTGTGAAGTTTGGAGATAGATGGATA  
3727 AGGGAATAATAGGCCACAGAAGGTGAACCTTTGTGCTTCAAGGACATTGGTGAGAGTCCAACAGACACAA  
3796 TTTATACTGCGACAGAACTTCAGCATTGTAATTATGTAATAACTCTAACCAAGGCTGTGTTTAGATTG  
3865 TATTAACATATCTTCTTTGGACTTCTGAAGAGACCACTCAATCCATCTGTACTTCCCTCTTGAAACCTG  
3934 ATGTAGCTGCTGTTGAACTTTTTAAAGAAGTGATGAAAAACCATTTTGAACCTTAAAGGTAAGTGGT  
4003 ACTATAGCATTTTGCTATCTTTTTAGTGTTAAAGAGATAAAGAATAATAAG

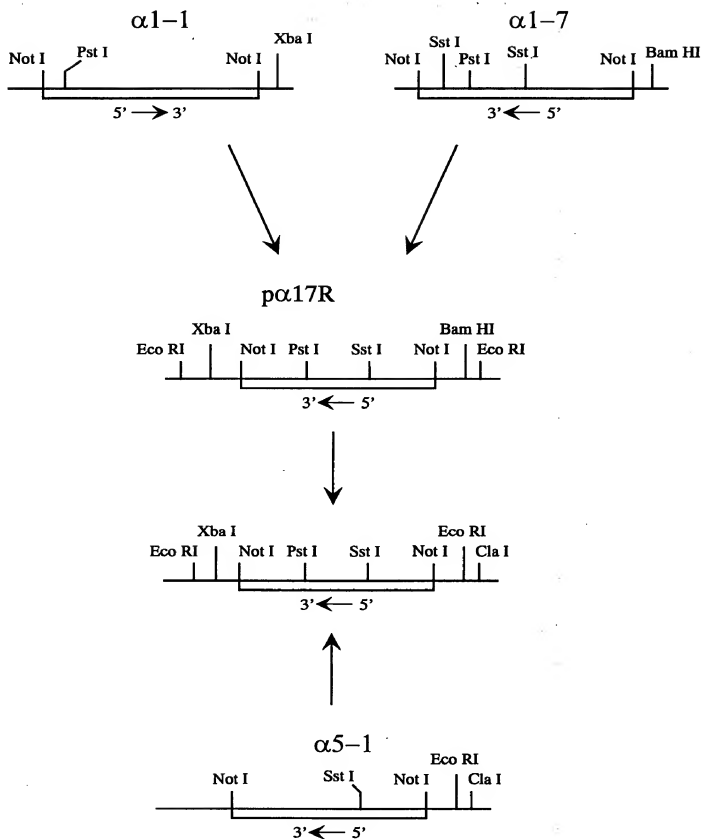


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**Figure 12**



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Fig. 12, Sheet 21 of 21

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